

## **REMARKS**

### **Status of the Claims**

Claims 1, 2, 4, 5 and 18-21 are currently pending in the application. Claims 2 and 18 stand rejected. Claim 1 is allowed. The Examiner objects to claims 4, 5, 19 and 21. Claim 20 is withdrawn as being drawn to a non-elected invention. Claims 18 and 19 have been amended without prejudice or disclaimer. No new matter has been added by way of the present amendments. Specifically, the amendment to claims 18 and 19 are to include the sequences of SEQ ID NOS:3 and 4, which are the peptides encoded by SEQ ID NOS: 1 and 2. Claim 18 has also been amended to be an independent claim. Reconsideration is respectfully requested.

### **Rejections Under 35 U.S.C. § 112, Second Paragraph**

Claims 2 and 18 stand rejected under 35 U.S.C. § 112, second paragraph, for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. (*See*, Office Action of February 11, 2008, at page 3, hereinafter, "Office Action"). Applicants traverse the rejection as set forth herein.

The Examiner states that claims 2 and 18 are indefinite for reciting hybridization conditions without washing conditions.

Furthermore, although Applicants do not agree that the claims are indefinite, the claims have been amended to be directed to the peptides of SEQ ID NOS: 3 and 4, in addition to the stringent hybridization conditions already recited in the claims.

The claimed DNA of claim 2 and claimed polynucleotide of claim 18 are restricted to those which hybridize under stringent conditions, i.e. 1 X SSC, 0.1% SDS, and 37 °C. In the

hybridization process, a washing step is carried out to remove DNAs which should not hybridize and cause background signal. That is, "DNA hybridize under stringent condition, 1 X SSC, 0.1% SDS, and 37°C" means DNA which can hybridize under the said condition and maintain hybridizing when washed under the same condition.

Accordingly, the claimed DNA and claimed polynucleotide are clearly defined by the hybridization condition. Other conditions such as washing condition can be appropriately determined based on general procedure of hybridization as the specification of the present application describes.

Therefore, reconsideration and withdrawal of the indefiniteness rejection of claims 2 and 18 are respectfully requested.

#### **Rejections Under 35 U.S.C. § 112, First Paragraph**

Claim 18 stands rejected under 35 U.S.C. § 112, first paragraph, for failing to comply with the written description requirement. (*See*, Office Action, at page 3-5). Applicants traverse the rejection as set forth herein.

The Examiner states that there is insufficient written description regarding the identity of the large genus of polynucleotides that would hybridize to the DNA of SEQ ID NO:2 comprising more than 15 nucleotides.

Claim 18 was amended to recite: "An isolated polynucleotide, hybridizing under stringent condition, 1 X SSC, 0.1% SDS, and 37°C to at least one of the following DNA (a) - (f):

(a) a polypeptide, consisting of an amino acid sequence identical to the amino acid sequence represented by SEQ ID NO: 2;

(b) a polypeptide, consisting of an amino acid sequence derived from the amino acid sequence represented by SEQ ID NO: 2 by deletion, substitution, or addition of within one to twenty amino acids and having N-acetylglucosamine transferase activity;

(c) a DNA, comprising the nucleotide sequence represented by SEQ ID NO: 1 and containing the nucleotide sequence that encodes the amino acid sequence represented by SEQ ID NO: 2;

(d) a DNA, hybridizing under stringent condition of 1 x SSC, 0.1% SDS and 37 °C to a DNA consisting of a nucleotide sequence complementary to that of the DNA (c) and encoding a protein having N-acetylglucosamine transferase activity;

(e) a DNA encoding the amino acid sequence represented by SEQ ID NO: 3 or 4 and consisting of at least 15 nucleotides; and

(f) a DNA, consisting of a nucleotide sequence complementary to that of the DNA (e)."

The amino acid sequence represented by SEQ ID NO:3 or 4 has low sequence homology with other similar sequences such as GnT-V, as shown in Example 4 and Figure 2 of the present application. Accordingly, the claimed polynucleotide of claim 18 is a DNA which encodes a partial amino acid sequence of SEQ ID NO:2 having a low sequence homology with other similar sequences or a DNA which hybridizes to a DNA consisting of a nucleotide sequence complementary to the nucleotide sequence of the DNA. The claimed polypeptide is a polypeptide consisting of at least 15 nucleotides in a region which has low sequence homology with other similar sequences. Accordingly, the polynucleotide can be use as a probe to detect the DNA of claim 1.

The Examiner refers to some court decisions. However, claim 18 is not a genus claim.

The claimed polypeptide of claim 18 possesses a feature that is a DNA encoding a region of amino acid sequence of SEQ ID NO:2, the region having low sequence homology with other similar sequences. Accordingly, a person skilled in the art can clearly recognize that the claimed polypeptide of claim 18 can be used as a probe to detect the DNA of claim 1.

Amended claim 19 claims a polynucleotide consisting of a nucleotide sequence which is complementary to the nucleotide sequence encoding the amino acid sequence represented by SEQ ID NO: 3 or 4. It is clear that the polynucleotide can be used as a probe to detect the DNA of claim 1. Accordingly, it is supported by the specification.

Reconsideration and withdrawal of the written description rejection of claim 18 are respectfully requested.

### **Objections to the Claims**

The Examiner objects to claims 4, 5, 19 and 21. (*See*, Office Action, at page 5). However, the Examiner provides no reasoning or support for the objection. Thus, it is believed that claims 4, 5, 19 and 21 are in condition for allowance, along with the remaining pending claims, at least in light of the present amendments and for the reasons provided, above.

Reconsideration and withdrawal of the objection to claims 4, 5, 19 and 21 are respectfully requested.

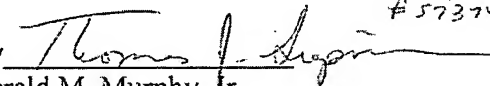
### CONCLUSION

If the Examiner has any questions or comments, please contact Thomas J. Siepmann, Ph.D., Registration No 57,374, at the offices of Birch, Stewart, Kolasch & Birch, LLP.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to our Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under § 1.17; particularly, extension of time fees.

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Respectfully submitted,

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